Claims

1. A device comprising a biodegradable polymer which comprises ethylene carbonate units of the formula A

-(-C(O)-O-CH_2-CH_2-O-)- A

having an ethylene carbonate content of 70 to 100 Mol%, an intrinsic viscosity of 0.4 to 4.0 dl/g measured in chloroform at 20°C at a concentration of 1 g/dl and a glass transition temperature of from 5 to 50°C, degradable by surface erosion which is governed by a non-hydrolytic mechanism.

2. The device of claim 1 wherein its surface is coated with the polymer.

3. The device of claim 1 or 2 further comprising a pharmacologically active agent.

4. The device of claim 3 wherein the pharmacologically active agent is dissolved or dispersed in the polymer.

5. The device of claim 3 or 4 containing an immunosuppressant or antiproliferative agent as pharmacologically active agent.

6. The device of any preceding claim in form of a stent or catheter.

7. The device of claim 6 in form of a drug-eluting stent.

8. Use of the device of any preceding claim for the controlled release of a pharmacologically active agent.

9. Use of the device of any one of claims 1 to 7 for treating or preventing neointimal proliferation and thickening, restenosis, vascular occlusion following vascular injury and/or for promoting tissue healing.

10. Method for treating or preventing neointimal proliferation and thickening, restenosis, vascular occlusion following vascular injury and/or for promoting tissue healing in a

human or animal body comprising implanting of a device of any one of claims 1 to 7 into a site where such treatment, prophylaxis or tissue healing is required.

11. A process for the production of a device of any one of claims 1 to 7 comprising coating the device with the ethylene carbonate polymer.

12. Use of a biodegradable polymer, comprising ethylene carbonate units of the formula A

-(-C(O)-O-CH_2-CH_2-O-)- A

having an ethylene carbonate content of 70 to 100 Mol%, an intrinsic viscosity of 0.4 to 4.0 dl/g measured in chloroform at 20°C at a concentration of 1 g/dl and a glass transition temperature of from 5 to 50°C, degradable by surface erosion which is governed by a non-hydrolytic mechanism for the coating of a device.

13. Use of a biodegradable polymer, comprising ethylene carbonate units of the formula A

-(-C(O)-O-CH_2-CH_2-O-)- A

having an ethylene carbonate content of 70 to 100 Mol%, an intrinsic viscosity of 0.4 to 4.0 dl/g measured in chloroform at 20°C at a concentration of 1 g/dl and a glass transition temperature of from 5 to 50°C, degradable by surface erosion which is governed by a non-hydrolytic mechanism for the manufacturing of a device for treating or preventing neointimal proliferation and thickening, restenosis, vascular occlusion following vascular injury and/or for promoting tissue healing.